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SEQUENCE LISTING

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<120> Antibodies to CD23, derivatives thereof, and their therapeutic uses

<130> 1430-256 / PG3433USw0

<140> US 09/674,716

<141> 2001-01-22

<150> CA 2,328,606

<151> 1999-05-07

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<151> 1999-05-07

<150> GB 9809839.5

<151> 1998-05-09

<160> 54

<170> MS Word

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1 5 10 15

ctg att ttt ttt att gtt ctt tta aaa ggg gtc cag agt gaa gtg aag 95  
Leu Ile Phe Phe Ile Val Leu Leu Lys Gly Val Gln Ser Glu Val Lys  
20 25 30

ctt gag gag tct gga gga ggc ttg gtg caa cct gga gga tcc atg aaa 143  
Leu Glu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Met Lys  
35 40 45

ctc tcc tgt gta gcc tct gga ttt act ttc agt ggc tac tgg atg tct 191  
Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Ser Gly Tyr Trp Met Ser  
50 55 60

tgg gtc cgc cag tct cca gag aag ggg ctt gag tgg gtt gct gaa att 239  
Trp Val Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp Val Ala Glu Ile  
65 70 75

aga ttg aaa tct gat aat tat gca aca cat tat gcg gag tct gtg aaa 287  
 Arg Leu Lys Ser Asp Asn Tyr Ala Thr His Tyr Ala Glu Ser Val Lys  
 80 85 90 95

ggg aag ttc acc atc tca aga gat gat tcc aaa agt cgt ctc tac ctg 335  
 Gly Lys Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser Arg Leu Tyr Leu  
 100 105 110

caa atg aac agc tta aga gct gaa gac agt gga gtt tat tac tgt aca 383  
 Gln Met Asn Ser Leu Arg Ala Glu Asp Ser Gly Val Tyr Tyr Cys Thr  
 115 120 125

gat ttc ata gac tgg ggc caa ggg aca cta gt 415  
 Asp Phe Ile Asp Trp Gly Gln Gly Thr Leu  
 130 135

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 <222> (3)..(437)

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 1 5 10 15

gtt cag ttt ctg ggg gtg ctt atg ttc tgg atc tct gga gtc agt ggg 95  
 Val Gln Phe Leu Gly Val Leu Met Phe Trp Ile Ser Gly Val Ser Gly  
 20 25 30

gat att gtg ata acc cag gat gaa ctc tcc aat cct gtc act tct gga 143  
 Asp Ile Val Ile Thr Gln Asp Glu Leu Ser Asn Pro Val Thr Ser Gly  
 35 40 45

gaa tca gtt tcc atc tcc tgc agg tct agt aag agt ctc ctg tat aag 191  
 Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys  
 50 55 60

gat ggg aag aca tac ttg aat tgg ttt ctg cag aga cca gga caa tct 239  
 Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser  
 65 70 75

cct cag ctc ctg atg tat ttg atg tcc acc cgt gca tca gga gtc tca 287  
 Pro Gln Leu Leu Met Tyr Leu Met Ser Thr Arg Ala Ser Gly Val Ser  
 80 85 90 95

gac cgg ttt agt ggc agt ggg tca ggc aca gat ttc acc ctg gaa atc 335  
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Glu Ile  
 100 105 110

agt aga gtg aag gct gag gat gtg ggt gtg tat tac tgt caa caa ctt 383

Ser Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu  
 115 120 125

gta gag tat cca ttc acg ttc ggc tcg ggg aca aag ttg gaa ata aaa 431  
 Val Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys  
 130 135 140

cgt acg 437  
 Arg Thr  
 145

<210> 3  
 <211> 16  
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 Arg Ser Ser Lys Ser Leu Leu Tyr Lys Asp Gly Lys Thr Tyr Leu Asn  
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 <222> (1)..(48)

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 Arg Ser Ser Lys Ser Leu Leu Tyr Lys Asp Gly Lys Thr Tyr Leu Asn  
 1 5 10 15

<210> 5  
 <211> 7  
 <212> PRT  
 <213> Mus musculus

<400> 5  
 Leu Met Ser Thr Arg Ala Ser  
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 <222> (1)..(21)

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 Leu Met Ser Thr Arg Ala Ser  
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<210> 7  
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 <212> PRT  
 <213> Mus musculus

<400> 7  
 Gln Gln Leu Val Glu Tyr Pro Phe Thr  
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<210> 8  
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 <212> DNA  
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<210> 9  
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<400> 9  
 Gly Tyr Trp Met Ser  
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<210> 10  
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 Gly Tyr Trp Met Ser  
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<210> 11  
 <211> 19  
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 Glu Ile Arg Leu Lys Ser Asp Asn Tyr Ala Thr His Tyr Ala Glu Ser  
 1 5 10 15

Val Lys Gly

<210> 12  
 <211> 57  
 <212> DNA  
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<220>  
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 gtg aag ggg 57  
 Val Lys Gly

<210> 13  
 <211> 3  
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 <213> Mus musculus

<400> 13  
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<210> 14  
 <211> 9  
 <212> DNA  
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 <222> (1)..(9)

<400> 14  
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 Phe Ile Asp  
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<210> 15  
 <211> 19  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic sequence

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 Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly  
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 Val His Ser

<210> 16

<211> 19  
 <212> PRT  
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<220>  
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<400> 16  
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Ala Gln Ala

<210> 17  
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 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: Humanised anti-CD23 antibody VL region

<220>  
 <221> CDS  
 <222> (1)..(348)

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 Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly  
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gag ccg gcc tcc atc tcc tgt cgc tcg agt aag agt ctc ctg tat aag 96  
 Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys  
                   20                  25                  30

gat ggg aag aca tac ttg aat tgg tac ctg cag aag cca ggg cag tct 144  
 Asp Gly Lys Thr Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln Ser  
           35                  40                  45

cca cag ctc ctg atc tat ttg atg tcc acc cgg gca tca ggg gtc cct 192  
 Pro Gln Leu Leu Ile Tyr Leu Met Ser Thr Arg Ala Ser Gly Val Pro  
           50                  55                  60

gac agg ttc agt ggc agt gga tca ggc aca gat ttt aca ctg aaa atc 240  
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile  
           65                  70                  75                  80

agc aga gtg gag gct gag gat gtt ggg gtt tat tac tgt caa cag ctg 288  
 Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu  
                   85                  90                  95

gta gag tat cca ttc acg ttc ggc caa ggg acc aag gtg gag atc aaa 336  
 Val Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
           100                  105                  110

cgt acg gtg gct 348

Arg Thr Val Ala  
115

<210> 18

<211> 1335

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanised anti-CD23 antibody VH region

<220>

<221> CDS

<222> (1)..(1335)

<400> 18

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Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Lys	Pro	Gly	Gly	
1				5					10					15		
tcc	ctt	aga	ctc	tcc	tgt	gca	gct	agc	gga	ttc	act	ttc	agt	ggc	tac	96
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Gly	Tyr	
			20					25					30			
tgg	atg	tcc	tgg	gtc	cgc	cag	gct	cca	ggg	aag	ggg	ctc	gag	tgg	gtt	144
Trp	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	
		35				40						45				
gct	gaa	att	aga	ttg	aaa	tct	gat	aat	tat	gca	aca	cat	tat	gcg	gag	192
Ala	Glu	Ile	Arg	Leu	Lys	Ser	Asp	Asn	Tyr	Ala	Thr	His	Tyr	Ala	Glu	
	50					55				60						
tct	gtg	aag	ggg	aaa	ttc	acc	atc	tca	aga	gat	gat	tca	aaa	tct	aga	240
Ser	Val	Lys	Gly	Lys	Phe	Thr	Ile	Ser	Arg	Asp	Asp	Ser	Lys	Ser	Arg	
65					70				75					80		
ctg	tat	ctg	caa	atg	aac	agc	ctg	aaa	acc	gag	gac	aca	gcc	gtg	tat	288
Leu	Tyr	Leu	Gln	Met	Asn	Ser	Leu	Lys	Thr	Glu	Asp	Thr	Ala	Val	Tyr	
			85					90					95			
tac	tgt	aca	gat	ttc	ata	gac	tgg	ggc	cag	gga	aca	cta	gtc	acc	gtc	336
Tyr	Cys	Thr	Asp	Phe	Ile	Asp	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	
			100					105					110			
tcc	tca	gcc	tcc	acc	aag	ggc	cca	tcg	gtc	ttc	ccc	ctg	gca	ccc	tcc	384
Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	
		115					120					125				
tcc	aag	agc	acc	tct	ggg	ggc	aca	gcg	gcc	ctg	ggc	tgc	ctg	gtc	aag	432
Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	
	130					135				140						
gac	tac	ttc	ccc	gaa	ccg	gtg	acg	gtg	tcg	tgg	aac	tca	ggc	gcc	ctg	480
Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	
145					150					155					160	

acc agc ggc gtg cac acc ttc ccg gct gtc cta cag tcc tca gga ctc	528
Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu	
165 170 175	
tac tcc ctc agc agc gtg gtg acc gtg ccc tcc agc agc ttg ggc acc	576
Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr	
180 185 190	
cag acc tac atc tgc aac gtg aat cac aag ccc agc aac acc aag gtg	624
Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val	
195 200 205	
gac aag aaa gtg gag ccc aaa tct tgt gac aaa act cac aca tgc cca	672
Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro	
210 215 220	
ccg tgc cca gca cct gaa ctc gcg ggg gca ccg tca gtc ttc ctc ttc	720
Pro Cys Pro Ala Pro Glu Leu Ala Gly Ala Pro Ser Val Phe Leu Phe	
225 230 235 240	
ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc	768
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val	
245 250 255	
aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc	816
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe	
260 265 270	
aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg	864
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro	
275 280 285	
cgg gag gag cag tac aac agc acg tac cgt gtg gtc agc gtc ctc acc	912
Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr	
290 295 300	
gtc ctg cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc	960
Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val	
305 310 315 320	
tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc	1008
Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala	
325 330 335	
aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg	1056
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg	
340 345 350	
gat gag ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc	1104
Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly	
355 360 365	
ttc tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg	1152
Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro	
370 375 380	
gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc	1200

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser  
 385 390 395 400

ttc ttc ctc tac agc aag ctc acc gtg gac aag agc agg tgg cag cag 1248  
 Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln  
 405 410 415

ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac 1296  
 Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His  
 420 425 430

tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa tga 1335  
 Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 435 440

<210> 19  
 <211> 57  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Oligonucleotide

<400> 19  
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<210> 20  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Oligonucleotide

<400> 20  
 gatggactag tgtcccttgg cccca 25

<210> 21  
 <211> 57  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Oligonucleotide

<400> 21  
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<210> 22  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Oligonucleotide

<400> 22

gatgcgtacg tytkatytcc avcttkgt

28

<210> 23

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 23

gatcaagctt ctctacagtt actgagcaca

30

<210> 24

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 24

aatcaagtat gtcttcccat ccttatacag gagactctta ctcgagcgcac aggagatgga 60  
ggc 63

<210> 25

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 25

cgctcgagta agagtctcct gtataaggat gggaagacat acttgaattg gtacctgcag 60  
aag 63

<210> 26

<211> 36

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Oligonucleotide

<400> 26

tgatgcccggtgtggacatca aatagatcag gagctg

36

<210> 27

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 27



ccccttcctt ggagcctggc ggaccagga catccagtag ccactgaaag tgaatccgct 60

<210> 33

<211> 60

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Oligonucleotide

<400> 33

gggaaggggc tcgagtgggt tgctgaaatt agattgaaat ctgataatta tgcaacacat 60

<210> 34

<211> 60

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Oligonucleotide

<400> 34

atcatctctt gagatgggtga atttcccctt cacagactcc gcataatgtg ttgcataatt 60

<210> 35

<211> 66

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Oligonucleotide

<400> 35

atctcaagag atgattcaaa atctagactg tatctgcaaa tgaacagcct gaaaaccgag 60  
gacaca 66

<210> 36

<211> 69

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Oligonucleotide

<400> 36

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<210> 37

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 37

gctgctcctt ttaagctttg gggtaaggc tcactagtca cagtctcc

48

<210> 38  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Oligonucleotide

<400> 38  
tgacggtgcc cccgcgagtt cagg

24

<210> 39  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Oligonucleotide

<400> 39  
cctgaactcg cgggggcacc gtca

24

<210> 40  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Oligonucleotide

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aagcttcgt cgaattcatt tacccggaga cag

33

<210> 41  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 41  
actagtcgac atgaagtttc cttctcaact tctgctc

37

<210> 42  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic sequence

<400> 42

Thr Lys Leu Glu Ile Lys Arg Thr  
1 5

<210> 43

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<400> 43

Thr Lys Val Glu Ile Lys Arg Thr  
1 5

<210> 44

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<400> 44

Thr Lys Leu Glu Ile Arg Arg Thr  
1 5

<210> 45

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<400> 45

Thr Lys Val Glu Ile Arg Arg Thr  
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<210> 46

<211> 415

<212> DNA

<213> Mus musculus

<400> 46

actagtgtcc cttggcccca gtctatgaaa tctgtacagt aataaactcc actgtcttca 60  
gctcttaagc tgttcatTTg caggtagaga cgacttttgg aatcatctct tgagatgggtg 120  
aacttccctt tcacagactc cgcataatgt gttgcataat tatcagattt caatctaatt 180  
tcagcaaccc actcaagccc cttctctgga gactggcgga cccaagacat ccagtagcca 240  
ctgaaagtaa atccagaggc tacacaggag agtttcatgg atcctccagg ttgcaccaag 300  
cctcctccag actcctcaag cttcacttca ctctggaccc cttttaaaag aacaataaaa 360  
aaaatcagcc caaaatccat ggtgaggtcc tgtgtgctga gtaactgtaa agctt 415

<210> 47

<211> 437

<212> DNA

<213> Mus musculus

<400> 47  
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tgtgcctgac ccaactgccac taaaccgggtc tgagactcct gatgcacggg tggacatcaa 180  
atacatcagg agctgaggag attgtcctgg tctctgcaga aaccaattca agtatgtcct 240  
cccatcctta tacaggagac tcttactaga cctgcaggag atggaaactg attctccaga 300  
agtgacagga ttggagagtt catcctgggt tatcacaata tccccactga ctccagagat 360  
ccagaacata agcaccacca gaaactgaac agagaacctc atgggtgagggt cctgtgtgct 420  
gagtaactgt aaagctt 437

<210> 48  
<211> 348  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Humanised anti-CD23 antibody VL region

<400> 48  
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cagctgttga cagtaataaa ccccaacatc ctcagcctcc actctgctga ttttcagtgt 120  
aaaatctgtg cctgatccac tgccactgaa cctgtcaggg acccctgatg cccgggtgga 180  
catcaaatag atcaggagct gtggagactg ccctggcttc tgcaggatcc aattcaagta 240  
tgtcttccca tccttatata ggagactctt actcgagcga caggagatgg aggccggctc 300  
tccaggggtg acgggcaggg agagtggaga ctgagtcac acaatata 348

<210> 49  
<211> 1335  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Humanised anti-CD23 antibody VH region

<400> 49  
tcatttacct ggagacaggg agaggctctt ctgcgtgtag tggttgtgca gagcctcatg 60  
catcacggag catgagaaga cgttccctg ctgccacctg ctcttgtcca cggtgagctt 120  
gctgtagagg aagaaggagc cgtcggagtc cagcacggga ggcgtgggtc ttagtattgt 180  
ctccggctgc ccattgctct cccactccac ggcgatgtcg ctgggataga agcctttgac 240  
caggcaggtc aggtgacct ggttcttgggt cagctcatcc cgggatgggg gcagggtgta 300  
cacctgtggt tctcggggct gccctttggc tttggagatg gttttctcga tgggggctgg 360  
gagggctttg ttggagacct tgcacttgta ctcccttgcca ttcagccagt cctgggtgcag 420  
gacggtgagg acgctgacca cacggtacgt gctgtgtgac tgctcctccc gcggctttgt 480  
cttggcatta tgcacctcca cgccgtccac gtaccagttg aacttgacct cagggtcttc 540  
gtggctcacg tccaccacca cgcatgtgac ctacggggtc cgggagatca tgagggtgtc 600  
cttgggtttt ggggggaaga ggaagactga cgggtgcccc gcgagttcag gtgctgggca 660  
cgggtgggcat gtgtgagttt tgtcacaaga tttgggctcc actttcttgt ccacttgggt 720  
gttgcgtggc ttgtgattca cgttgagatg gttagtctgg gtgccaagc tgctggaggg 780  
cacggtcacc acgctgctga gggagtagag tcctgaggac ttagtagacag ccgggaagg 840  
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gtccttgacc aggcagccca gggccgctgt gccccagag gtgctcttgg aggagggtgc 960  
cagggggaag accgatgggc ccttggtgga ggctgaggag acggtgacta gtgttccttg 1020  
gccccagtct atgaaatctg tacagtaata cacggctgtg tcctcggttt tcaggctgtt 1080  
catttgcaga tacagtctag attttgaatc atctcttgag atgggtgaatt tccccttcac 1140

agactccgca taatgtgttg cataattatc agatttcaat ctaatttcag caaccactc 1200  
gagccccttc cctggagcct ggcggaccca ggacatccag tagccactga aagtgaatcc 1260  
gctagctgca caggagagtc taagggaccc cccgggcttt accaagcctc ccccagactc 1320  
caccagctgc acctc 1335

<210> 50  
<211> 137  
<212> PRT  
<213> Mus musculus

<400> 50  
Ala Leu Gln Leu Leu Ser Thr Gln Asp Leu Thr Met Asp Phe Gly Leu  
1 5 10 15  
Ile Phe Phe Ile Val Leu Leu Lys Gly Val Gln Ser Glu Val Lys Leu  
20 25 30  
Glu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Met Lys Leu  
35 40 45  
Ser Cys Val Ala Ser Gly Phe Thr Phe Ser Gly Tyr Trp Met Ser Trp  
50 55 60  
Val Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp Val Ala Glu Ile Arg  
65 70 75 80  
Leu Lys Ser Asp Asn Tyr Ala Thr His Tyr Ala Glu Ser Val Lys Gly  
85 90 95  
Lys Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser Arg Leu Tyr Leu Gln  
100 105 110  
Met Asn Ser Leu Arg Ala Glu Asp Ser Gly Val Tyr Tyr Cys Thr Asp  
115 120 125  
Phe Ile Asp Trp Gly Gln Gly Thr Leu  
130 135

<210> 51  
<211> 145  
<212> PRT  
<213> Mus musculus

<400> 51  
Ala Leu Gln Leu Leu Ser Thr Gln Asp Leu Thr Met Arg Phe Ser Val  
1 5 10 15  
Gln Phe Leu Gly Val Leu Met Phe Trp Ile Ser Gly Val Ser Gly Asp  
20 25 30  
Ile Val Ile Thr Gln Asp Glu Leu Ser Asn Pro Val Thr Ser Gly Glu  
35 40 45  
Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys Asp  
50 55 60

Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser Pro  
65 70 75 80

Gln Leu Leu Met Tyr Leu Met Ser Thr Arg Ala Ser Gly Val Ser Asp  
85 90 95

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Glu Ile Ser  
100 105 110

Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu Val  
115 120 125

Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg  
130 135 140

Thr  
145

<210> 52

<211> 116

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanised anti-CD23 antibody VL region

<400> 52

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly  
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys  
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln Ser  
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Met Ser Thr Arg Ala Ser Gly Val Pro  
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile  
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu  
85 90 95

Val Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
100 105 110

Arg Thr Val Ala  
115

<210> 53

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanised anti-CD23 antibody VH region

<400> 53

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Gly Tyr  
20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ala Glu Ile Arg Leu Lys Ser Asp Asn Tyr Ala Thr His Tyr Ala Glu  
50 55 60

Ser Val Lys Gly Lys Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser Arg  
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr  
85 90 95

Tyr Cys Thr Asp Phe Ile Asp Trp Gly Gln Gly Thr Leu Val Thr Val  
100 105 110

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser  
115 120 125

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys  
130 135 140

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu  
145 150 155 160

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu  
165 170 175

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr  
180 185 190

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val  
195 200 205

Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro  
210 215 220

Pro Cys Pro Ala Pro Glu Leu Ala Gly Ala Pro Ser Val Phe Leu Phe  
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val  
245 250 255

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe  
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro  
275 280 285

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr  
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val  
305 310 315 320

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala  
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg  
340 345 350

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly  
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro  
370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser  
385 390 395 400

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln  
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His  
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
435 440

<210> 54

<211> 8

<212> PRT

<213> Homo sapiens

<400> 54

His Ser Ile Gly Lys Val Ile Ile  
1 5